

MINE ROCK PILE, OPEN PIT, and SUBSIDENCE ZONE REVISED CLOSURE ALTERNATIVE DESCRIPTION (CURRENT CONDITIONS)

The revised closure alternative generally consist of regrading, placing a cover and revegetating the mine rock piles. The subsidence zone and the open pit will be vegetated and surrounded by a security fence. The ground water requirements associated with the revised closure alternative will be achieved by source control (regrading, cover, and revegetation) at the mine rock piles, and by a seepage extraction system for the subsidence and open pit zone.

The following paragraphs describe in more detail the various design components associated with the revised closure alternative.

- Capulin, Goat Hill North and Goat Hill South Mine Rock Piles : The slopes will be graded to approximately 2H:1V to 3H:1V by generally excavating from the crest and backfilling at the toe, generally as a balanced cut and fill.

The graded surface will be covered with NAG material obtained from Spring Gulch Mine Rock Pile. The thickness of the NAG cover will be minimum 3.0 on relatively flat areas and on slopes of 3H:1V or and flatter, and 5 ft. on slopes steeper 3H:1V.

The graded and NAG covered surface will be vegetated with native species, including tress, shrubs, forbs and native grasses. Planting will be by transplanting seedlings of woody species and seeding of grasses and forbs.

Erosion Control Ditches will be located at every 5 ft in vertical height on cut slopes and every 100 ft on fill slopes. Surface run-off from the erosion control ditches will be conveyed to Sedimentation Bonds via Concrete Collection Channels prior to discharge to natural drainages.

- Sugar Shack West : The slope will be graded to about 2H:1V by generally excavating from the crest and backfilling at the toe. Excess cut material will be used as backfill in the grading of the Sulphur Gulch South.

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The graded surface will be covered with NAG material obtained from Spring Gulch Mine Rock Pile. The thickness of the NAG cover will be minimum 3.0 on relatively flat areas and on slopes of 3H:1V or flatter, and 5 ft. on slopes steeper than 3H:1V.

The graded and NAG covered surface will be revegetated with native species, including trees, shrubs, forbs and native grasses. Planting will be by transplanting seedlings of woody species and seeding of grasses and forbs.

Erosion Control Ditches will be located at every 5 ft in vertical height on cut slopes and every 100 ft on fill slopes. Surface runoff from the erosion control ditches will be conveyed to Sedimentation Basins via Concrete Collection Channels prior to discharge to natural drainages.

- Sugar Shack South and Middle Mine Rock Piles : The portions of the mine rock piles above the first bench from the toe (EL 8650), will be graded by excavating to 2H:1V to 2.1H:1V to allow for the construction of the NAG cover. Excavation will proceed from the crest in a manner to allow for heavy construction equipment operation. The excavated material will be used as backfill in the grading of the Sulphur Gulch South.

The portions of the mine rock pile below the first bench will be covered with a partial erosion control berm with a slope 2H:1V.

3 ft to 5 ft NAG cover will be placed on all regraded slopes. The cut slopes will be excavated with 5 ft high benches to allow for the construction of the cover as the excavation proceeds. The fill slopes will be backfilled with a minimum of 50 ft thick mine rock with outer shell being 3 to 5 ft NAG.

The graded and NAG covered surface, and the portions of the slopes above the erosion control berm and regraded slopes will be revegetated with native species, including trees, shrubs, forbs and native grasses. Planting will be by transplanting seedlings of woody species and seeding of grasses and forbs.

Erosion Control Ditches will be located at every 5 ft in vertical height on cut slopes and every 100 ft on fill slopes. Surface runoff from the erosion control ditches will be conveyed to Sedimentation Basins via Concrete Collection Channels prior to discharge to natural drainages.

- Sulphur Gulch South Mine Rock Pile : The slope of the mine rock pile will be graded by backfilling from the toe to about 3.2H:1V to allow for the construction of the NAG cover. Backfill material will consist of the excess excavated mine rock from the Sugar Shack West, Sugar Shack South, and Middle Mine Rock Piles.

The graded surface will be covered with NAG material obtained from Spring Gulch Mine Rock Pile. The thickness of the NAG cover will be minimum 3.0 on relatively flat areas and on slopes of 3H:1V or and flatter, and 5 ft. on slopes steeper 3H:1V.

The graded and NAG covered surface will be vegetated with native species, including tress, shrubs, forbs and native grasses. Planting will be by transplanting seedlings of woody species and seeding of grasses and forbs.

Erosion Control Ditches will be located at every 5 ft in vertical height on cut slopes and every 100 ft on fill slopes. Surface runoff from the erosion control ditches will be conveyed to Sedimentation Bonds via Concrete Collection Channels prior to discharge to natural drainages.

- Blind Gulch Mine Rock Pile : The slopes will be graded to about 3.1H:1V by generally excavating from the top and backfilling at the toe, generally as a balanced cut and fill.

The graded surface will be covered with NAG material obtained from Spring Gulch Mine Rock Pile. The thickness of the NAG cover will be minimum 3.0 on relatively flat areas and on slopes of 3H:1V or and flatter, and 5 ft. on slopes steeper 3H:1V.

The graded and NAG covered surface will be vegetated with native species, including tress, shrubs, forbs and native grasses. Planting will be by transplanting seedlings of woody species and seeding of grasses and forbs.

Erosion Control Ditches will be located at every 5 ft in vertical height on cut slopes and every 100 ft on fill slopes. Surface runoff from the erosion control ditches will be conveyed to Sedimentation Bonds via Concrete Collection Channels prior to discharge to natural drainages.

- Spring Gulch Mine Rock Pile : The mine rock pile will be graded by excavating to provide the required NAG material to be used as cover at the other mine rock piles. The excavation slopes will range from 2H:1V to 3H:1V.

The graded surface will be vegetated with native species, including tress, shrubs, forbs and native grasses. Planting will be by transplanting seedlings of woody species and seeding of grasses and forbs.

Erosion Control Ditches will be located at every 5 ft in vertical height on cut slopes and every 100 ft on fill slopes. Surface run-off from the erosion control ditches will be conveyed to Sedimentation Bonds via Concrete Collection Channels prior to discharge to natural drainages.

- Open Pit and Subsidence Zone : The existing benches of the open pit will be vegetated where practicable and suitable for growth. The open pit will be fenced.

The existing subsidence zone will be vegetated where practicable.

Surface run-off from within the open pit and subsidence zone will be conveyed to underground workings.

- General : Surface water run-on from the adjacent drainage basins around the disturbed areas will be collected in ditches and discharged to natural drainages.